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January 6, 2017

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Dear Pat and Anne,

On behalf of Big Ox Energy, LLC, (Big Ox), Jon and I appreciate our call Wednesday, January 3rd. As we discussed, we have been working closely with the team at Big Ox over the holidays to respond to the Information Requests that we received from EPA Region VII two days before Christmas. We appreciate your understanding that it has obviously been challenging to respond with the two broad Information Requests over the Holiday season. Through this letter we are proactively and constructively providing you with those documents that we have been able to readily identify to date.

We thought it would be helpful to provide you with a broader context to facilitate our mutual understanding, so that we can best insure that EPA receives the most relevant information on a priority basis in the most efficient manner. To that end we think it would be helpful to continue to have conference calls through this evolving and iterative process to ensure that we are meeting your objectives and working together to address any issues or problems.

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I. Executive Overview

As we discussed, Big Ox has taken extraordinary measures to respond to all the issues and concerns relating to the hydrogen sulfide gas that has been released by the sewer system and intruded into the affected homes.

Big Ox Energy was alerted in November 2016 that some South Sioux City residents were smelling sulfur-like odors in their homes that appeared to be coming up from the sewers and which Big Ox was informed was hydrogen sulfide (H_2S) gas. Big Ox immediately began an investigation and stopped discharging to the sewer system. Although Big Ox did not know the cause of the odors, or whether its plant was responsible, Big Ox volunteered to pay for the costs of area residents to stay at a local hotel while the issue was investigated.

Big Ox hired an outside environmental firm, Haley & Aldrich, with expertise in industrial processes and sewer gases. In addition, Big Ox hired an outside firm of Certified Industrial Hygienists, NJ Associates, to test all residential homes.

The State of Nebraska set a standard of 7.17 ppb of H_2S to evaluate South Sioux City indoor air samples. This is the level used by the State of California as a healthy protective level for continuous exposure to H_2S over a lifetime. 7.17 ppb also corresponds with the lowest levels at which the smell of H_2S can be detected. It is far lower than the OSHA standard of 10 ppm for safe exposure to H_2S 8 hours per day, 250 days per year.

Of the 17 homes tested by NJ Associates, 15 had no detectible H_2S . Two homes showed minor levels of H_2S gas in a preliminary screening test slightly above the 7.17 ppb standard, but a more exacting 24 hour test using state of the art equipment showed no detectible level of H_2S . No residual H_2S was observed on clothing, carpeting or fabric furniture that was tested. Odors are caused by gases. Since no H_2S gas was detected, any odors in the homes were not due to H_2S gas.

Sulfur gases are common in all sewers as a by-product of human and industrial wastes. The objective data reviewed by the outside experts consulted by Big Ox show that sewer gases are not due to the Big Ox plant. After Big Ox stopped discharging to the sewers on November 1st, elevated levels of sulfides (which cause sulfur odors) and sewer gas were observed at higher than normal levels on a majority of the days during the 35 day testing period that followed the date when Big Ox stopped discharging to the sewers.

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Sulfur compounds are commonly used in industry. Chemicals such as sodium hydroxide, sulfuric acid, ammonia or alkaline detergents can either produce sulfur gases or combine with other residential or industrial waste to produce sulfur gases.

The process at the Big Ox plant does not add sulfur gas in the sewer system. Big Ox collects the same agricultural waste that has been historically discharged directly into the sewer system. That waste may contain sulfur compounds used in area industries. The Big Ox plant converts a large portion of that waste into renewable natural gas and fertilizer. What the Big Ox plant then discharges to the sewer system is in a much more diluted form than the waste that the Big Ox plant receives.

Because all sewers contain gas, virtually all building codes require adequate plumbing traps to prevent sewer gases from migrating into residences and buildings. The plumbing code for South Sioux City requires that all homes have adequate protections, such as proper traps and vents, to protect against sewer gases. A proper plumbing system prevents the entry of sewer gases, regardless of the amount or concentration in the sewer.

Objective testing showed that virtually all of the residents who said they smelled odors in their homes had inadequate or broken plumbing systems that failed to protect their homes from the entry of sewer gases.

II. Clean Water Act Information Request

As an initial response to the CWA Information Request, as well as to supplement our constructive ongoing dialogue, enclosed is a copy of the wastewater permit issued by Sioux City (City) to Big Ox. (See Exhibit A). As we discussed, Big Ox submits extensive operating and monitoring reports to the City to comply with the terms of this permit. On our call, we agreed that it would be redundant and duplicative to require Big Ox to provide EPA with the same monitoring and operational reports and records that the City receives from Big Ox—given that the City has already provided most of this information to EPA Region VII. Accordingly, we would like to work with the EPA Region to reduce the scope of the Clean Water Act request to exclude all overlapping information that EPA has already received (or expects to receive) from the City. While we are in the process of confirming this with the City, it is our current understanding that the City has produced all monitoring reports relating to wastewater from the Big Ox plant.

Second, enclosed is the “Tipping Agreement” between Big Ox and South Sioux City. (See Exhibit B). As you can see in Section 3.01, Big Ox is contractually obligated to accept the wastewaters that are delivered by Sioux City. The Agreement does not define or limit the conditions or characteristics of the incoming wastewater.

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As we discussed, we believe that we have a mutual interest with EPA and the City to ensure that acidic wastewaters are not introduced into any of the affected wastewater and sewer systems, given that the formation of hydrogen sulfide is caused when low pH acidic feedstocks combine with sulfides. The sulfides will always be present in the sewer system regardless of whether or not Big Ox discharges its wastewaters, given the other wastewater sources containing sulfides. Accordingly, a solution that we all should embrace is prohibiting the introduction of low pH acidic wastes. To that end, Big Ox has proposed the draft Wastewater Treatment Agreement to be signed by the city, as well as all the affected dischargers generating the wastewaters delivered to Big Ox. (See Exhibit C). This draft proposed Agreement includes improved provisions that would prohibit the introduction of any effluent that would be more acidic than a pH of 5. We would welcome EPA Region VII's input and suggestions on these suggested draft improvements to help prevent a re-occurrence of recent problems.

Finally, enclosed as Exhibits D and E are schematics that illustrate Big Ox's process flow and the City's sampling locations.

* * *

We are continuing our search for responsive information and expect to be able to provide you next week with a timeline for a full response. In the meantime, please let us know if you have any questions. On behalf of Big Ox we look forward to working with you to address all EPA's issues and questions.

Best regards,

A handwritten signature in black ink, appearing to read "William M. Guerry". The signature is fluid and cursive, with the first name "William" and last name "Guerry" clearly distinguishable.

William M. Guerry
Jonathan K. Cooperman